Ch2 Quadratics

- Expansion (Factored to Standard Form)
- Factoring Trinomials (Roots)

Work from exam review

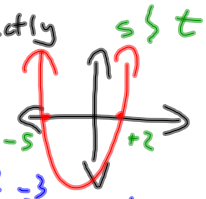
Jun 2-8:15 AM

Factored $y = a(x-s)(x-t)$

$(x+5)(x-2) = 0$

Read zeros directly

$-5, +2$



$\frac{s+t}{2} \Rightarrow \frac{-5+2}{2} = \frac{-3}{2}$

$(-\frac{3}{2}, k)$

$(-\frac{3}{2}, -\frac{9}{4})$

Jun 2-9:43 AM

g) $a(a-5) = 0$

$0 \quad 5$

$(x-s) \quad (x-t)$

h) $(4x+3)(5x-2) = 0$

$-\frac{3}{4} \quad \frac{2}{5}$

zeros - when ball hits the ground

- breakeven for a business

Jun 2-9:47 AM

Expand

$(x+5)(x-2) = f(x)$

First
Outside
Inside
Last

$x^2 - 2x + 5x - 10 = f(x)$

$x^2 + 3x - 10 = f(x)$

To find a pt [ROOTS]

STANDARD FORM - Allows you to substitute or solve for a specific pt.

Jun 2-9:54 AM

$3x(x+5) - 2x(x+2) + 3x = 0$

$3x^2 + 15x - 2x^2 - 4x + 3x = 0$

$x^2 + 14x = 0$

$3(x+2)(x-4) = 0$

$3[x^2 - 4x + 2x - 8] = 0$

$3[x^2 - 2x - 8] = 0$

$3x^2 - 6x - 24 = 0$

Jun 2-9:58 AM

Factor

$n^2 + 7n - 30 = 0$

$n^2 + 10n - 3n - 30 = 0$

$n(n+10) - 3(n+10) = 0$

$(n+10)(n-3) = 0$

$-10, +3$

Decomposition

A	M
+7	-30

30
2 15
-3 +10

$2y^2 + 9y + 4 = 0$

A	M
+9	+8

8 1

$2y^2 + 8y + 1y + 4 = 0$

$2y(y+4) + 1(y+4) = 0$

$(y+4)(2y+1) = 0$

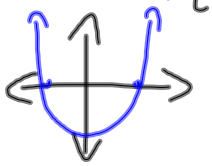
$-4 \quad -\frac{1}{2}$

Jun 2-10:00 AM

$y^2 - 25 = 0$

$(y - 5)(y + 5) = 0$

Difference of Squares



Jun 2-10:08 AM

$y^2 + 10y + 25 = 0$

$\sqrt{a}\ \sqrt{c} \times 2 = b$

$y(5) \times 2 = 10$

$(y + 5)^2 = 0$

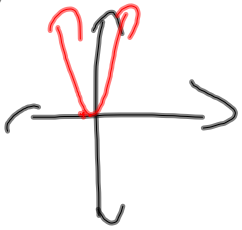
Jun 2-10:10 AM

$4 \times 3 \times 2$

$9y^2 + 24y + 16 = 0$

$(3y + 4)^2 = 0$

$-\frac{4}{3}$



Jun 2-10:13 AM

6 a) $y = x^2 - x - 30$ $y = -24$

$-24 = x^2 - x - 30$

$0 = x^2 - x - 30 + 24$

$0 = x^2 - x - 6$

A	M
-1	-6
×2	-3

$x^2 + 2x - 3x - 6$

$x(x+2) - 3(x+2)$

$(x+2)(x-3)$

$(-2, -24)(3, -24)$

Jun 2-10:14 AM

q 1-13
p 68 &69

Jun 2-10:18 AM